

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	Long, et al.	Examiner:	Ganapathy Krishnan
Serial No.:	10/616,278	Group Art Unit:	1623
Confirmation No:	2088	Docket:	1341-2
Filed:	July 9, 2003	Dated:	July 23, 2004
For:	PREPARATION OF HYALURONIC ACID FROM EGGSHELL MEMBRANE		

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

*I hereby certify this correspondence is being deposited
with the United States Postal Service as first class mail,
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Commissioner for Patents, P.O. Box 1450,
Alexandria, Virginia 22313-1450
on July 23, 2004*

Signed: 

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

In order to fulfill the requirements of candor and good faith set forth in 37 C.F.R.

§1.56, Applicants submit herewith the following Supplemental Information Disclosure

Statement in accordance with the provisions of 37 C.F.R. §1.97 and §1.98.

UNITED STATES PATENT PUBLICATIONS

<u>PATENTEE</u>	<u>PUBLICATION NO.</u>	<u>PUBLICATION DATE</u>
Brown et al.	2002/0037312 A1	March 28, 2002
Brown et al.	2003/0175332 A1	September 18, 2003

07/28/2004 KBETENA1 00000012 10616278

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UNITED STATES PATENTS

<u>PATENTEE</u>	<u>PATENT NO.</u>	<u>ISSUE DATE</u>
Drizen et al.	5,079,236	January 7, 1992
Stahl	6,090,596	July 18, 2000
Falk et al.	6,194,392 B1	February 27, 2001
Henderson et al.	6,255,295 B1	July 3, 2001
Ubara	6,498,204 B1	December 24, 2002

FOREIGN PATENT DOCUMENT

<u>COUNTRY</u>	<u>PUBLICATION NO.</u>	<u>PUBLICATION DATE</u>
Japan	JP1043502	February 15, 1989

NON-PATENT PUBLICATIONS

1. Baker, J.R. et al., "A Study of the Organic Material of Hen's-Egg Shell", *Biochemical Journal*, 1962, 82, 352-361.
2. "Egg Science and Technology", Eds. W.J. Stadelman and O.J. Cotterill, Food Products Press, a subsidiary of The Haworth Press, Bingham, NY, 1990.
3. Britton, W.M. and Hale, K.K., "Amino Acid Analysis of Shell Membranes of Eggs from Young and Old Hens Varying in Shell Quality", *Poultry Science*, 56:865-871, 1977.
4. Cifonelli, J.A., "The Colormetric Estimation of Uronic Acid", *Methodology of Connective Tissue Research*, ED:DA Hall, Joynson-Bruvvers Ltd., Oxford, 1976, Chapter 26, pp. 253-256.
5. Armstrong, DC and Johns, MR, "Improved Molecular Weight Analysis of Streptococcal Hyaluronic Acid by Size Exclusion Chromatography" in *Biotechnology Techniques*.
6. Fernandez, M.S., Araya, M., and Arias, JL, "Eggshells are Shaped by a Precise Spatio-Temporal Arrangement of Sequentially Deposited Macromolecules", *Matrix. Biol.*, 16:13-20, 1997.
7. Takahashi, K., Shirai, K., Kitamura, M., Hattori, M., "Soluble Egg Shell Membrane Protein as a Regulating Material for Collagen Matrix Reconstruction", *Biosci. Biotechnology & Biochemistry*, 60:1299-1302, 1996.

NON-PATENT PUBLICATIONS

8. T.C. Laurent, "Structure of Hyaluronic Acid", *Chem. and Mol. Biol. of Intracellular Matrix*, Vol. 2, 1970, pp. 703-732.
9. O.H. Lowry et al., "Protein Measurement with the Folin Phenol Reagent", *The Journal of Biological Chemistry*, Vol. 193 (1951) pp. 265-275.
10. W.D. Comper et al., "Physiological Function of Connective Tissue Polysaccharides", *Physiological Reviews*, Vol. 58, No. 1 (1978) pp. 255-315.
11. K. Meyer, "Chemical Structure of Hyaluronic Acid", *Fed. Proceed*, Vol. 17 (1958) pp. 1075-1077.
12. E.A. Balazs et al., "Hyaluronic Acid and Replacement of Vitreous and Aqueous Humor", *Mod. Probl. Ophthalmol.*, Vol. 10 (1972) pp. 3-21.
13. U.B.G. Laurent, "Hyaluronate in Human Aqueous Humor", *Arch Ophtalmol.*, Vol. 101 (1983) pp. 129-130., Vol. 101 (1983) pp. 129-130.

The above-referenced documents are listed on PTO Form 1449. We have enclosed the cited documents to facilitate reference to them.

A Non-Patent Publication entitled "The Colorimetric Estimation of Uronic Acid" submitted in the original Information Disclosure Statement filed December 24, 2003 was mistakenly identified by an incorrect author, David Hall. This publication is being resubmitted at this time with the correct author, J.A. Cifonelli.

This Supplemental Information Disclosure Statement is being submitted after the mailing of the first Office Action, but prior to the mailing of a Final Office Action or a Notice of Allowance. Accordingly, Applicants submit herewith a check for the \$180.00 fee set forth in 37 C.F.R. §1.17(p).

Applicants are not aware of any other references to be identified at this time. If the Examiner has any questions or comments relating to the present application, he or she is respectfully invited to contact Applicants' attorney at the telephone number set forth below.

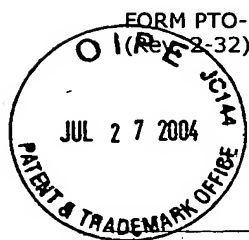
Respectfully submitted,



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 FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE
 (Rev. 2-32) PATENT AND TRADEMARK OFFICE

 INFORMATION DISCLOSURE
 STATEMENT BY APPLICANT

(Use several sheets if necessary)

 ATTY. DOCKET NO.
 1341-2

 SERIAL NO.
 10/616,278

 APPLICANT
 Long, et al.

 CONFIRMATION NO.
 2088

 FILING DATE
 July 9, 2003

 GROUP
 1623

U.S. PATENT PUBLICATIONS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
		2002/0037 312 A1	03/28/02	Brown et al.			
		2003/0175 332A1	09/18/03	Brown et al.			

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
		5,079,236	01/07/92	Drizen et al.			
		6,090,596	07/18/00	Stahl			
		6,194,392 B1	02/27/01	Falk et al.			
		6,255,295 B1	07/03/01	Henderson et al.			
		6,498,204 B1	12/24/02	Ubara			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
							YES	NO
		JP1043502	02/15/89	Japan				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

			Baker, J.R. et al., "A Study of the Organic Material of Hen's-Egg Shell", <i>Biochemical Journal</i> , 1962, 82, 352-361.
			"Egg Science and Technology", Eds. W.J. Stadelman and O.J. Cotterill, Food Products Press, a subsidiary of The Haworth Press, Bingham, NY, 1990.

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication with applicant.

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (Rev. 2-32) PATENT AND TRADEMARK OFFICE INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	ATTY. DOCKET NO. 1341-2	SERIAL NO. 10/616,278
	APPLICANT Long, et al.	CONFIRMATION NO. 2088
	FILING DATE July 9, 2003	GROUP 1623

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

			Britton, W.M. and Hale, K.K., "Amino Acid Analysis of Shell Membranes of Eggs from Young and Old Hens Varying in Shell Quality", <i>Poultry Science</i> , 56:865-871, 1977.
			Cifonelli, J.A., "The Colormetric Estimation of Uronic Acid", <i>Methodology of Connective Tissue Research</i> , ED:DA Hall, Joynson-Bruvvers Ltd., Oxford, 1976, Chapter 26, pp. 253-256.
			Armstrong, DC and Johns, MR, "Improved Molecular Weight Analysis of Streptococcal Hyaluronic Acid by Size Exclusion Chromatography" in <i>Biotechnology Techniques</i> .
			Fernandez, M.S., Araya, M., and Arias, JL, "Eggshells are Shaped by a Precise Spatio-Temporal Arrangement of Sequentially Deposited Macromolecules", <i>Matrix. Biol.</i> , 16:13-20, 1997.
			Takahashi, K., Shirai, K., Kitamura, M., Hattori, M., "Soluble Egg Shell Membrane Protein as a Regulating Material for Collagen Matrix Reconstruction", <i>Biosci. Biotechnology & Biochemistry</i> , 60:1299-1302, 1996.
			T.C. Laurent, "Structure of Hyaluronic Acid", <i>Chem. and Mol. Biol. of Intracellular Matrix</i> , Vol. 2, 1970, pp. 703-732.
			O.H. Lowry et al., "Protein Measurement with the Folin Phenol Reagent", <i>The Journal of Biological Chemistry</i> , Vol. 193 (1951) pp. 265-275.
			W.D. Comper et al., "Physiological Function of Connective Tissue Polysaccharides" <i>Physiological Reviews</i> , Vol. 58, No. 1 (1978) pp. 255-315.
			K. Meyer, "Chemical Structure of Hyaluronic Acid", <i>Fed. Proceed</i> , Vol. 17 (1958) pp. 1075-1077.
			E.A. Balazs et al., "Hyaluronic Acid and Replacement of Vitreous and Aqueous Humor" <i>Mod. Probl. Ophthal.</i> , Vol. 10 (1972) pp. 3-21.

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			U.B.G. Laurent, "Hyaluronate in Human Aqueous Humor", <i>Arch Ophthalmol.</i> , Vol. 101 (1983) pp. 129-130., Vol. 101 (1983) pp. 129-130.

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